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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/136,483	08/19/1998	SUJEET KUMAR	N19.12-0016	1810
24113	7590	03/07/2006	EXAMINER	
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A. 4800 IDS CENTER 80 SOUTH 8TH STREET MINNEAPOLIS, MN 55402-2100			MARCHESCHI, MICHAEL A	
			ART UNIT	PAPER NUMBER
			1755	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/136,483

Applicant(s)

KUMAR ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on remand from BPAI dated 8/15/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 17-18 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The finality of the rejections of the last office action are withdrawn in response to the remand from the Board of Patent Appeals and Interferences with a mailing date of 8/15/05. The decision (from the Board of Patent Appeals and Interferences and CAFC) made in this application are made of record and have been considered as required by the remand by the Board of Patent Appeals and Interferences.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-10 and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rostoker et al (U.S. Patent 5,389,194).

The Rostoker et al. reference teaches a method of polishing a surface using a polishing composition composed of particles dispersed in an aqueous solution. The taught particles are composed of alumina (alpha or gamma alumina-see column 4, lines 16-19) or silica particles.

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The particles have a size (X value of 10-100) and a distribution that is controlled to within a certain selected size (Y value which is "P" (10-50%) of "X"). See the claims Example 3 teach that the particles have an average particle size of 10 nm (the X value) and a distribution where all the particles have a size within 10% of the average particles size (the X value). This means that all the particles are within the range of 10% of the average particle size and 110% of the average particles size. Accordingly, there are no particles have a size greater than 3 times the average particle size. This is because 10% (P value) of 10 nm is 1 nm and 110% of 10 nm is 11 nm, thus the size distribution can be 10 nm  $\pm$  1 nm or a distribution of between 9-11 nm (reads on the distribution of instant claims 1, 23, 24 and 28). Similarly, assuming X to be 10 nm and P to be 50% (values clearly disclosed by reference), then Y would be 50% of 10 nm or 5 nm, thus the distribution can be 10 nm  $\pm$  5 nm, thus there are no particles have a size greater than 3 times the average particle size. With respect to the primary particle limitation, it is the examiners position that absent evidence to the contrary, the particle defined in the reference reads on a primary particle.

The reference teaches a polishing composition which comprises the claimed collection of particles (see specific reasoning above), thus since the claimed invention suggests the claimed distribution for the reasons defined above, the instant claims are anticipated by the reference. Assuming *arguendo*, in the alternative, the reference clearly teaches a distribution which encompasses the claimed distribution because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping

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ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

Claims 11-16 are rejected under 35 U.S.C. 103(a) as being obvious over Rostoker et al (U.S. Patent 5,389,194) in view of Farkas et al. (730).

Farkas et al. teaches in abstract and column 6, lines 14-20 that in polishing compositions the solvent can be water, an alcohol or a mixture thereof and that the abrasive is generally 1-12 percent of the slurry.

The primary reference is silent with respect to the amount of particles (claims 11-12) in the dispersion, however, it is the examiners position that that one skilled in the art would have routinely known the amount of abrasive to be included in the polishing slurry to produce the most optimum slurry, said amount being a conventional amount, as clearly shown by Farkas et al.

With respect to claims 13-14, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that either water, alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

With respect to claims 15-16, it is prima facie obvious to combine two or more materials disclosed by the prior art to form a third material (combination of abrasives) that is to be used for the same purpose. In re Kerkhoven 205 USPQ 1069.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 5-16 and 19-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 14-24 of copending Application No. 09/433,202. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting the instant claims. With respect to the alumina form, the copending claims defines alumina, in general, and the broad interpretation of this makes obvious any alumina form

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Claims 1-3, 5-14 and 19-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 15, 23 and 24 of copending Application No. 09/841,255 in view of Farkas et al.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting the instant claims. With respect to the concentration, it is the examiners position that that one skilled in the art would have routinely known the amount of abrasive to be included in the polishing slurry to produce the most optimum slurry, said amount being a conventional amount, as clearly shown by Farkas et al. With respect to the metal oxide, the copending claims define a non silicon metal compound and this broadly reads on alumina.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2, 5-9, 11-16 and 19-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending Application No. 11/046,610. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-3, 5-8 and 19-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all the claims of copending Application No. 09/969,025. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In view of the remand dated 8/15/05, the examiner will comment on the declaration of by Professor Singh.

All of applicants other remarks based on the Rostoker reference have been addressed in the original Examiners answers dated 11/16/00. The examiners remarks being incorporated herein by reference.

The declaration under 37 CFR 1.132 by Dr. Singh is insufficient to overcome the rejection of the claims based upon the Rostoker patent. The declaration criticizes one possible method of determining Q, as defined in the reference and there has been no showing of a preponderance of evidence that the Q value cannot be determined by the disclosed method. Since every patent is presumed valid (35 U.S.C. 282), and since that presumption includes the presumption of operability *Metropolitan Eng. Co. v. Coe*, 78 F.2d 199, 25 USPQ 216 (D.C. Cir.



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1935), affidavits or declarations attacking the operability of a patent cited as a reference must rebut the presumption of operability by a preponderance of the evidence. In re Sasse, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). Given the other teachings in the patent that Q is inversely proportional to Y, the fact the patent gives actual numerical values for Q and the teachings of the examples where the size distribution of the particles are clearly stated, the fact that the method for determining Q might be unclear to Dr. Singh and not found in the books cited by Dr. Singh does not detract from rest of the teachings of this patent nor does it show the Q value cannot be determined by one of ordinary skill in the art. The declaration does not show that the claimed particles are different and unobvious over those of the reference and Dr. Singh's comments with respect to the Siegel patent are given no weight since he has not provided any evidence to support his conclusion and the fact the Siegel patent is not part of the rejection. Furthermore, the argument in lines 2-4 on page 5 of the declaration that he is unaware of any other methods of making the claimed particles is not supported by facts. As defined in the Rostoker patent, the Q value is inversely related to the Y and that patent clearly defines the Q values. The declaration defines that the units for the Q value is not dimensionless but rather 1/cm or 1 length. The examiner is unclear as to how Dr. Singh obtained these units and the declaration does not clearly show that the Q value is not dimensionless. The number or amount of particles having a certain size would be nm or a percentage of nm and not  $1/\text{cm}^3$  (number of particles/volume of particles). The declaration continues to argue that the description (of the reference Q value) is inconsistent. Contrary to this statement, the description is clear as to how to obtain the Q values. The declaration also states that the Q value does not correspond to a Gaussian distribution. Although this may be the case, this value is the ratio of a number of

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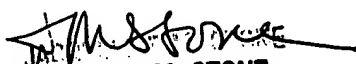
particles having an average size divided by the number of particles having a size less than 50% of the average size (the value of Q is understood by the examiner and the Board or Patent Appeals and Interferences). The Q value is merely a quality factor and the fact that this value is not disclosed in any books and is not a common method does not mean that it cannot be determined by one of ordinary skill in the art in reviewing the Rostoker patent. The declaration provides no sufficient evidence to support the statements made therein. The balance of the declaration refers to references and rejections not made in this application. Finally, Dr. Singh is reminded that the patent number for Rostoker, as defined in the declaration is incorrect.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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